

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): March 11, 2008

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Seattle District – SSHI, NWS-2007-1539-NO

Form 1 of 3 – Isolated Wetlands (G, J, K, L, N, Q, S, and T)

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: WA County/parish/borough: Whatcom City: Bellingham
Center coordinates of site (lat/long in degree decimal format): Lat: 48° 48' 56.71", Long. 122° 30' 12.86"
Universal Transverse Mercator: Zone 10 N5407093.09 E 536443.63

Name of nearest waterbody: East Bear Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Nooksack River

Name of watershed or Hydrologic Unit Code (HUC): 17110004, Nooksack River

☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination. Date: 18 October 2007

☒ Field Determination. Date(s): 30 August 2007

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

☐ Waters subject to the ebb and flow of the tide.

☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **are and are not** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- ☐ TNWs, including territorial seas
- ☐ Wetlands adjacent to TNWs
- ☒ Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- ☐ Non-RPWs that flow directly or indirectly into TNWs
- ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- ☒ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- ☐ Impoundments of jurisdictional waters
- ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

NOTE: See Form 2 for info on wetlands abutting RPWs and Form 3 for info on wetlands adjacent to RPWs

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: linear feet: width (ft) and/or acres.

Wetlands:

c. Limits (boundaries) of jurisdiction based on:

Elevation of established OHWM (if known): .

2. Non-regulated waters/wetlands (check if applicable):³

☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
Explain: **Wetlands in question do not have surface water connections with other waters of the U. S.**

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is “adjacent”:

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under Rapanos have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are “relatively permanent waters” (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size:

Pick List

Drainage area:

Pick List

Average annual rainfall: inches

Average annual snowfall: inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

☐ Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.

Project waters are **Pick List** river miles from RPW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Project waters are **Pick List** aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW⁵:

Tributary stream order, if known:

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☐ Natural

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

- ☐ Artificial (man-made). Explain: .
- ☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):

Average width: feet
 Average depth: feet
 Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):

- | | | |
|--|--|-----------------------------------|
| <input type="checkbox"/> Silts | <input type="checkbox"/> Sands | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles | <input type="checkbox"/> Gravel | <input type="checkbox"/> Muck |
| <input type="checkbox"/> Bedrock | <input type="checkbox"/> Vegetation. Type/% cover: | |
| <input type="checkbox"/> Other. Explain: . | | |

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .

Presence of run/riffle/pool complexes. Explain: .

Tributary geometry: **Pick List**

Tributary gradient (approximate average slope): %

(c) **Flow:**

Tributary provides for: **Pick List**

Estimate average number of flow events in review area/year: **Pick List**

Describe flow regime: .

Other information on duration and volume: .

Surface flow is: **Pick List**. Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

☐ Dye (or other) test performed: .

Tributary has (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Bed and banks | |
| <input type="checkbox"/> OHWM ⁶ (check all indicators that apply): | |
| <input type="checkbox"/> clear, natural line impressed on the bank | <input type="checkbox"/> the presence of litter and debris |
| <input type="checkbox"/> changes in the character of soil | <input type="checkbox"/> destruction of terrestrial vegetation |
| <input type="checkbox"/> shelving | <input type="checkbox"/> the presence of wrack line |
| <input type="checkbox"/> vegetation matted down, bent, or absent | <input type="checkbox"/> sediment sorting |
| <input type="checkbox"/> leaf litter disturbed or washed away | <input type="checkbox"/> scour |
| <input type="checkbox"/> sediment deposition | <input type="checkbox"/> multiple observed or predicted flow events |
| <input type="checkbox"/> water staining | <input type="checkbox"/> abrupt change in plant community |
| <input type="checkbox"/> other (list): | |
| <input type="checkbox"/> Discontinuous OHWM. ⁷ Explain: . | |

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

- | | |
|--|--|
| <input type="checkbox"/> High Tide Line indicated by: | <input type="checkbox"/> Mean High Water Mark indicated by: |
| <input type="checkbox"/> oil or scum line along shore objects | <input type="checkbox"/> survey to available datum; |
| <input type="checkbox"/> fine shell or debris deposits (foreshore) | <input type="checkbox"/> physical markings; |
| <input type="checkbox"/> physical markings/characteristics | <input type="checkbox"/> vegetation lines/changes in vegetation types. |
| <input type="checkbox"/> tidal gauges | |
| <input type="checkbox"/> other (list): | |

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: .

Identify specific pollutants, if known: .

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

(iv) **Biological Characteristics. Channel supports (check all that apply):**

- ☐ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
 - ☐ Federally Listed species. Explain findings: .
 - ☐ Fish/spawn areas. Explain findings: .
 - ☐ Other environmentally-sensitive species. Explain findings: .
 - ☐ Aquatic/wildlife diversity. Explain findings: .

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size: . acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

☐ Directly abutting

☐ Not directly abutting

☐ Discrete wetland hydrologic connection. Explain: .

☐ Ecological connection. Explain: .

☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) **Biological Characteristics. Wetland supports (check all that apply):**

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/percent cover. Explain: .
- ☐ Habitat for:
 - ☐ Federally Listed species. Explain findings: .
 - ☐ Fish/spawn areas. Explain findings: .
 - ☐ Other environmentally-sensitive species. Explain findings: .
 - ☐ Aquatic/wildlife diversity. Explain findings: .

3. **Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately () acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

- ☐ TNWs: linear feet width (ft), Or, acres.
- ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**

- ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide rationale indicating that tributary flows seasonally: .
- ☐ Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
 Identify type(s) of waters: .

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

- ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
 Identify type(s) of waters: .

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

- ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above.
☐ Wetlands directly abutting an RPW where tributaries typically flow “seasonally.” Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

- ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

- ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.⁹

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- ☐ Demonstrate that impoundment was created from “waters of the U.S.,” or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰

- ☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

⁸See Footnote # 3.

⁹To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
- ☐ Other non-wetland waters: acres.
- Identify type(s) of waters: .
- ☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- ☒ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - ☒ Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- ☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
- ☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☒ Wetlands: 0.71 acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Wetland delineation report dated May 2006.
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - ☒ Office concurs with data sheets/delineation report.
 - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: .
- ☐ Corps navigable waters' study: .
- ☐ U.S. Geological Survey Hydrologic Atlas: .
 - ☐ USGS NHD data.
 - ☐ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name: Ferndale Quad
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
- ☐ National wetlands inventory map(s). Cite name: .
- ☒ State/Local wetland inventory map(s): WA State Department of Ecology, 2001
- ☐ FEMA/FIRM maps: .
- ☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): WA State Department of Ecology, 2005; City of Bellingham, 2004.
or ☐ Other (Name & Date): .
- ☐ Previous determination(s). File no. and date of response letter: .
- ☐ Applicable/supporting case law: .
- ☐ Applicable/supporting scientific literature: .
- ☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD:

Date of Site Visit: 30 August 2007

Investigator(s): Randel Perry

Mr. Petur Sim, Mr. Gray Rand, and Mr. Ed Miller (consultants), Ms. Susan Meyer and Ms. Lori Enlund (Ecology) were also on site at the time of the visit.

1. Site Description and Significant Resources in the area: The site consists of 3 tax parcels with a total of 71 acres. The site is irregular in shape with a general slope to the south. Surrounding vicinity has been substantially developed for agricultural, recreational and residential uses. The site is bounded by the Bellingham Golf Course to the north, residential developments to the south, and undeveloped property to the east, and residential properties and Aldrich road to the west. Site was historically used for agricultural purposes and continues to be regularly mowed. The site is currently undeveloped and primarily vegetated with a field grasses. Wetlands in question are scattered across the properties. There are identified streams on the project site that are tributaries of East Bear Creek. East Bear Creek is located approximately 0.32 miles southwest of the site.

2. Project Purpose and Description: Fill/grade associated with residential development.

3. Physical / Chemical Characteristics:

- a. Streamflow c.f.s.: 0.5 to 2.0cfs
- b. Salinity: NA
- c. Soils: Whatcom silt loam – 0-3% & 30-60% slopes (non-hydric w/ hydric inclusions).
Whatcom Labounty silt loam 0-8% slope (non-hydric w/ hydric inclusions)
Wetlands - 0"-5" - 10YR 3/2 silt loam
Below 8" – 2.5YR 4/2 silt loam w/ 10YR 3/6 mottles
Uplands – 10YR 3/2 silt loam
- d. Hydrology: Saturation at shallow depth and signs of inundation at center of wetlands.

4. Biological Characteristics:

- a. Percentage of dominant vegetation FAC or wetter: 95% in wetlands
- b. Vegetation species list:

Riparian Wetlands

Soft rush (*Juncus effusus*), FACW+
Creeping buttercup (*Ranunculus repens*), FACW
Velvet grass (*Holcus lanatus*), FAC
Reed canarygrass (*Phalaris arundinacea*), FACW
Creeping bentgrass (*Agrostis stolonifera*), FAC+
Bluegrass (*Poa* spp.) FAC - FACU
Knotgrass (*Paspalum distichum*), FACW
Meadow foxtail (*Alopecurus pratensis*), FACW
Sawbeak sedge (*Carex stipata*), FACW+
Pacific willow (*Salix lasiandra*), FACW+

Field wetlands

Velvet grass (*Holcus lanatus*), FAC
Creeping buttercup (*Ranunculus repens*), FACW
Creeping bentgrass (*Agrostis stolonifera*), FAC+

Uplands

Canadian thistle (*Cirsium arvense*), FACU+
Reed canarygrass (*Phalaris arundinacea*), FACW

Tenuous bentgrass (*Agrostis tenuis*), FAC
Sweet vernal grass, (*Anthoxanthum odoratum*), FACU

- c. Fauna: bird presence.
- d. NWI Classification, associations/communities: PEM

5. Lateral Extent of Jurisdiction:

- a. OHW, MHHW, MHW and datum: 3' average
- b. Acreage of wetlands to be impacted: Approximately 0.93 acres
- c. Total acreage of wetlands/waters on site: 10.60+ acres of wetlands (some continue offsite)

- 6. Additional information:** The project area contains a number of streams that appear to be jurisdictional. The consultant has separated the streams into Reach designations, labeled 1-4 (see attached map). The streams are tributaries of East Bear Creek which flows into Silver Creek, a tributary of the Nooksack River. Based on site observations and information provided by the consultant:

Reach 1 Tributary - the largest reach at the lower end of the site, has water in it through June (greater than 6 months of flow), is approximately 1,400 feet long, an approximate average width of 6', approximate average depth of 1.5', and approximate flow in March of 2'/sec. Cfs approximated at 12 in March.

Reach 2 Tributary - the westernmost tributary to Reach 1, contributing less than 10% of existing flow in reach 1. This reach had water in it through the winter and early spring, March or April (greater than 3 months of flow), is approximately 750 feet long, with an approximate average width of 1.5', approximate average depth of 0.3', and approximate flow in March of 1'/sec. Cfs approximated at 0.5cfs in March.

Reach 3 Tributary - Center tributary to Reach 1 on the site, contributing approximately 60% of reach 1 flow. This reach is approximately 1,825 feet long, had flow through the early spring, April-May (greater than 3 months of flow), with an approximate average width of 3', approximate average depth of 0.5', and approximate flow of 1'/sec in March. Cfs approximated at 1.5 cfs in March.

Reach 4 Tributary - easternmost tributary to Reach 1 on-site. This reach is approximately 1,500 feet long, had flow through the early spring, April-May (greater than 3 months of flow), with an approximate average width of 3', approximate average depth of 0.5', and approximate flow of 1'/sec in March. Cfs approximated at 1.5 cfs in March.

Corps personnel walked around the identified boundaries of all wetlands and followed the apparent flow paths offsite. The flagged wetland boundaries appear to accurately delineate the wetland edges.

For Wetlands G, J, K, L, N, Q, S, and T, no surface water features could be identified connecting these wetlands with any other wetland or waterbody. These wetlands are separated from other wetlands or waterbodies by upland soils. The historic removal of woody vegetation and the subsequent use of the site for cattle grazing has compacted the natural soils creating conditions that impound precipitation for extended periods in depressions on the site. These wetlands appear to be a result of this condition.

Wetland A, E, R, U are abutting the Reach 1 and 4 tributaries
Wetland D and F are abutting the Reach 3 tributary

Wetland H is abutting the Reach 2 tributary

Wetland B drains south through a discrete surface feature (narrow braided shallow channel through grass clumps) into Wetland A/Reach 4 Tributary.

Wetland I drains south through a discrete surface feature (wide, braided shallow channel through grass clumps) into Wetland F/Reach 3 tributary

Wetland M drains southeast through a discrete surface feature (narrow, braided shallow channel through grass clumps) into Wetland F/Reach 3 tributary

Wetland P drains southeast through a discrete surface feature (narrow, braided shallow channel through grass clumps) into Wetland H/Reach 2 tributary

Wetland O extends offsite to the north. No determination was made for this wetland – it will not be affected by proposed project.

Conclusions: **Areas may not be jurisdictional wetlands.** Wetlands G, J, K, L, N, Q, S, and T do not have a surface water connection to other navigable or interstate waters of the U. S. or tributaries of waters of the U. S. These wetlands are not used for interstate commerce including recreational activities, commercial fishing activities, or used for industrial purposes. These wetlands appear to be isolated and would not fall under Section 404 jurisdiction.

Areas may be jurisdictional wetlands. Wetlands A, D, E, F, H, R, and U are abutting relatively permanent waters that appear to flow into East Bear Creek which flows into Silver Creek, a tributary of the Nooksack River, a designated navigable waterway used of interstate and foreign commerce. These wetlands appear to be jurisdictional waters of the U. S.

Wetlands B, I, M, and P are considered adjacent, per the definition found at 33 CFR 328.2(c), to relatively permanent waters that appear to flow into drainage features that flow into East Bear Creek which flows into Bear Creek, a tributary of Silver Creek, a tributary of the Nooksack River, a designated navigable waterway used of interstate and foreign commerce. These wetlands appear to have a significant nexus to downstream traditional navigable waters and appear to be jurisdictional waters of the U. S.

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 18 October 2007

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Seattle District – SSHI, NWS-2007-1539-NO

Form 2 of 3–Wetlands Abutting RPWs (A, D, E, F, H, R, and U)

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: WA County/parish/borough: Whatcom City: Bellingham

Center coordinates of site (lat/long in degree decimal format): Lat: 48° 48' 56.71", Long. 122° 30' 12.86"

Universal Transverse Mercator: Zone 10 N5407093.09 E 536443.63

Name of nearest waterbody: East Bear Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Nooksack River

Name of watershed or Hydrologic Unit Code (HUC): 17110004, Nooksack River

☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination. Date: 18 October 2007

☒ Field Determination. Date(s): 30 August 2007

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

☐ Waters subject to the ebb and flow of the tide.

☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **are and are not** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- ☐ TNWs, including territorial seas
- ☐ Wetlands adjacent to TNWs
- ☒ Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- ☐ Non-RPWs that flow directly or indirectly into TNWs
- ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- ☒ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- ☐ Impoundments of jurisdictional waters
- ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

NOTE: See Form 1 for info on isolated wetlands and Form 3 for info on wetlands adjacent to RPWs

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: 5, 475 linear feet: average 3' width (ft) and/or 0.38 acres.

Wetlands: 8.6 acres

c. Limits (boundaries) of jurisdiction based on:

Elevation of established OHWM (if known): .

2. Non-regulated waters/wetlands (check if applicable):³

☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.

Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is “adjacent”:

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under Rapanos have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are “relatively permanent waters” (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. **If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.**

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: Nooksack River (HUC 17110004) 795 **square miles**

Drainage area: 130 **acres**

Average annual rainfall: 35 inches

Average annual snowfall: 16 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

☒ Tributary flows through **3** tributaries before entering TNW.

Project waters are **5-10** river miles from TNW.

Project waters are **1 (or less)** river miles from RPW.

Project waters are **2-5** aerial (straight) miles from TNW.

Project waters are **1 (or less)** aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW⁵: Onsite streams flow to East Fork Bear Creek, which flows into Bear Creek, a tributary of Spring Creek, which flows into the Nooksack River, a designated navigable waterway.

Tributary stream order, if known: 1.

(b) General Tributary Characteristics (check all that apply):

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary is: ☒ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: Grade control structure placed in Reach 3.

Tributary properties with respect to top of bank (estimate):

Average width: 18 feet

Average depth: 10 feet

Average side slopes: **2:1**.

Primary tributary substrate composition (check all that apply):

☒ Silts ☐ Sands ☐ Concrete
☐ Cobbles ☐ Gravel ☐ Muck
☐ Bedrock ☒ Vegetation. Type/% cover: grass species, 85%
☐ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Stable and vegetated.

Presence of run/riffle/pool complexes. Explain: none.

Tributary geometry: **Meandering**

Tributary gradient (approximate average slope): 5 %

(c) **Flow:**

Tributary provides for: **Seasonal flow**

Estimate average number of flow events in review area/year: **2-5**

Describe flow regime: intermittent and seasonal.

Other information on duration and volume: .

Surface flow is: **Discrete and confined**. Characteristics: See additional information below.

Subsurface flow: **Unknown**. Explain findings: .

☐ Dye (or other) test performed: .

Tributary has (check all that apply):

☒ Bed and banks
☒ OHWM⁶ (check all indicators that apply):
☒ clear, natural line impressed on the bank ☐ the presence of litter and debris
☐ changes in the character of soil ☒ destruction of terrestrial vegetation
☒ shelving ☐ the presence of wrack line
☒ vegetation matted down, bent, or absent ☐ sediment sorting
☐ leaf litter disturbed or washed away ☐ scour
☐ sediment deposition ☐ multiple observed or predicted flow events
☐ water staining ☐ abrupt change in plant community
☐ other (list):
☐ Discontinuous OHWM.⁷ Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☒ High Tide Line indicated by: ☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects ☐ survey to available datum;
☐ fine shell or debris deposits (foreshore) ☐ physical markings;
☐ physical markings/characteristics ☐ vegetation lines/changes in vegetation types.
☐ tidal gauges
☐ other (list):

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: Water is clear with moderate organic debris, general water quality is good, watershed has been extensively developed for agricultural and residential uses, downstream waters of Spring Creek are on the WA State 303(d) list for temperature and fecal coliform.

Identify specific pollutants, if known: Herbicides, fertilizers.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

(iv) **Biological Characteristics. Channel supports (check all that apply):**

- ☒ Riparian corridor. Characteristics (type, average width): shrub/herbaceous, 100+ feet.
- ☒ Wetland fringe. Characteristics: PEM dominated by grass species.
- ☐ Habitat for:
 - ☐ Federally Listed species. Explain findings: .
 - ☐ Fish/spawn areas. Explain findings: .
 - ☐ Other environmentally-sensitive species. Explain findings: .
 - ☐ Aquatic/wildlife diversity. Explain findings: .

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

☐ Directly abutting

☐ Not directly abutting

☐ Discrete wetland hydrologic connection. Explain: .

☐ Ecological connection. Explain: .

☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) **Biological Characteristics. Wetland supports (check all that apply):**

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/percent cover. Explain: .
- ☐ Habitat for:
 - ☐ Federally Listed species. Explain findings: .
 - ☐ Fish/spawn areas. Explain findings: .
 - ☐ Other environmentally-sensitive species. Explain findings: .
 - ☐ Aquatic/wildlife diversity. Explain findings: .

3. **Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately () acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

- ☐ TNWs: linear feet width (ft), Or, acres.
- ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**

- ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide rationale indicating that tributary flows seasonally: .
- ☒ Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. [Data supporting this conclusion is provided at Section III.B.](#) Provide rationale indicating that tributary flows seasonally: Tributaries identified as having continuous flow for 3-6 months. See additional information for details.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☒ Tributary waters: **5,475** linear feet width (ft).
- ☐ Other non-wetland waters: acres.
- Identify type(s) of waters: .

3. **Non-RPWs⁸ that flow directly or indirectly into TNWs.**

- ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

☐ Tributary waters: linear feet width (ft).

☐ Other non-wetland waters: acres.

Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

- ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
- ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above.
- ☒ Wetlands directly abutting an RPW where tributaries typically flow “seasonally.” Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: Delineation titled, “*Wetland Delineation Report for the E8-E9 Project Site*,” identifies wetlands as abutting on-site tributaries. Observations during site visit confirmed this.

Provide acreage estimates for jurisdictional wetlands in the review area: **8.6** acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

- ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

- ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.⁹**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- ☐ Demonstrate that impoundment was created from “waters of the U.S.,” or
- ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. **ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰**

- ☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
- ☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- ☐ which are or could be used for industrial purposes by industries in interstate commerce.
- ☐ Interstate isolated waters. Explain: .
- ☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

☐ Tributary waters: linear feet width (ft).

☐ Other non-wetland waters: acres.

Identify type(s) of waters: .

☐ Wetlands: acres.

⁸See Footnote # 3.

⁹To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- ☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
- ☐ Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- ☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
- ☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: 0.71 acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Wetland delineation report dated May 2006.
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
- ☒ Office concurs with data sheets/delineation report.
- ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: .
- ☐ Corps navigable waters' study: .
- ☐ U.S. Geological Survey Hydrologic Atlas: .
- ☐ USGS NHD data.
- ☐ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name: Ferndale Quad
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
- ☐ National wetlands inventory map(s). Cite name: .
- ☒ State/Local wetland inventory map(s): WA State Department of Ecology, 2001
- ☐ FEMA/FIRM maps: .
- ☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): WA State Department of Ecology, 2005; City of Bellingham, 2004.
or ☐ Other (Name & Date): .
- ☐ Previous determination(s). File no. and date of response letter: .
- ☐ Applicable/supporting case law: .
- ☐ Applicable/supporting scientific literature: .
- ☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD:

Date of Site Visit: 30 August 2007

Investigator(s): Randel Perry

Mr. Petur Sim, Mr. Gray Rand, and Mr. Ed Miller (consultants), Ms. Susan Meyer and Ms. Lori Enlund (Ecology) were also on site at the time of the visit.

- 1. Site Description and Significant Resources in the area:** The site consists of 3 tax parcels with a total of 71 acres. The site is irregular in shape with a general slope to the south. Surrounding vicinity has been substantially developed for agricultural, recreational and residential uses. The site is bounded

by the Bellingham Golf Course to the north, residential developments to the south, and undeveloped property to the east, and residential properties and Aldrich road to the west. Site was historically used for agricultural purposes and continues to be regularly mowed. The site is currently undeveloped and primarily vegetated with a field grasses. Wetlands in question are scattered across the properties. There are identified streams on the project site that are tributaries of East Bear Creek. East Bear Creek is located approximately 0.32 miles southwest of the site.

2. Project Purpose and Description: Fill/grade associated with residential development.

3. Physical / Chemical Characteristics:

- a. Streamflow c.f.s.: 0.5 to 2.0cfs
- b. Salinity: NA
- c. Soils: Whatcom silt loam – 0-3% & 30-60% slopes (non-hydric w/ hydric inclusions).
 Whatcom Labounty silt loam 0-8% slope (non-hydric w/ hydric inclusions)
 Wetlands - 0"-5" - 10YR 3/2 silt loam
 Below 8" – 2.5YR 4/2 silt loam w/ 10YR 3/6 mottles
 Uplands – 10YR 3/2 silt loam
- d. Hydrology: Saturation at shallow depth and signs of inundation at center of wetlands.

4. Biological Characteristics:

- a. Percentage of dominant vegetation FAC or wetter: 95% in wetlands
- b. Vegetation species list:

Riparian Wetlands

Soft rush (*Juncus effusus*), FACW+
 Creeping buttercup (*Ranunculus repens*), FACW
 Velvet grass (*Holcus lanatus*), FAC
 Reed canarygrass (*Phalaris arundinacea*), FACW
 Creeping bentgrass (*Agrostis stolonifera*), FAC+
 Bluegrass (*Poa* spp.) FAC - FACU
 Knotgrass (*Paspalum distichum*), FACW
 Meadow foxtail (*Alopecurus pratensis*), FACW
 Sawbeak sedge (*Carex stipata*), FACW+
 Pacific willow (*Salix lasiandra*), FACW+

Field wetlands

Velvet grass (*Holcus lanatus*), FAC
 Creeping buttercup (*Ranunculus repens*), FACW
 Creeping bentgrass (*Agrostis stolonifera*), FAC+

Uplands

Canadian thistle (*Cirsium arvense*), FACU+
 Reed canarygrass (*Phalaris arundinacea*), FACW
 Tenuous bentgrass (*Agrostis tenuis*), FAC
 Sweet vernal grass, (*Anthoxanthum odoratum*), FACU

- c. Fauna: bird presence.
- d. NWI Classification, associations/communities: PEM

5. Lateral Extent of Jurisdiction:

- a. OHW, MHHW, MHW and datum: 3' average

- b. Acreage of wetlands to be impacted: Approximately 0.93 acres
- c. Total acreage of wetlands/waters on site: 10.60+ acres of wetlands (some continue offsite)

6. Additional information: The project area contains a number of streams that appear to be jurisdictional. The consultant has separated the streams into Reach designations, labeled 1-4 (see attached map). The streams are tributaries of East Bear Creek which flows into Silver Creek, a tributary of the Nooksack River. Based on site observations and information provided by the consultant:

Reach 1 Tributary - the largest reach at the lower end of the site, has water in it through June (greater than 6 months of flow), is approximately 1,400 feet long, an approximate average width of 6', approximate average depth of 1.5', and approximate flow in March of 2'/sec. Cfs approximated at 12 in March.

Reach 2 Tributary - the westernmost tributary to Reach 1, contributing less than 10% of existing flow in reach 1. This reach had water in it through the winter and early spring, March or April (greater than 3 months of flow), is approximately 750 feet long, with an approximate average width of 1.5', approximate average depth of 0.3', and approximate flow in March of 1'/sec. Cfs approximated at 0.5cfs in March.

Reach 3 Tributary - Center tributary to Reach 1 on the site, contributing approximately 60% of reach 1 flow. This reach is approximately 1,825 feet long, had flow through the early spring, April-May (greater than 3 months of flow), with an approximate average width of 3', approximate average depth of 0.5', and approximate flow of 1'/sec in March. Cfs approximated at 1.5 cfs in March.

Reach 4 Tributary - easternmost tributary to Reach 1 on-site. This reach is approximately 1,500 feet long, had flow through the early spring, April-May (greater than 3 months of flow), with an approximate average width of 3', approximate average depth of 0.5', and approximate flow of 1'/sec in March. Cfs approximated at 1.5 cfs in March.

Corps personnel walked around the identified boundaries of all wetlands and followed the apparent flow paths offsite. The flagged wetland boundaries appear to accurately delineate the wetland edges.

For Wetlands G, J, K, L, N, Q, S, and T, no surface water features could be identified connecting these wetlands with any other wetland or waterbody. These wetlands are separated from other wetlands or waterbodies by upland soils. The historic removal of woody vegetation and the subsequent use of the site for cattle grazing has compacted the natural soils creating conditions that impound precipitation for extended periods in depressions on the site. These wetlands appear to be a result of this condition.

Wetland A, E, R, U are abutting the Reach 1 and 4 tributaries

Wetland D and F are abutting the Reach 3 tributary

Wetland H is abutting the Reach 2 tributary

Wetland B drains south through a discrete surface feature (narrow braided shallow channel through grass clumps) into Wetland A/Reach 4 Tributary.

Wetland I drains south through a discrete surface feature (wide, braided shallow channel through grass clumps) into Wetland F/Reach 3 tributary

Wetland M drains southeast through a discrete surface feature (narrow, braided shallow channel through grass clumps) into Wetland F/Reach 3 tributary

Wetland P drains southeast through a discrete surface feature (narrow, braided shallow channel through grass clumps) into Wetland H/Reach 2 tributary

Wetland O extends offsite to the north. No determination was made for this wetland – it will not be affected by proposed project.

Conclusions: Areas may not be jurisdictional wetlands. Wetlands G, J, K, L, N, Q, S, and T do not have a surface water connection to other navigable or interstate waters of the U. S. or tributaries of waters of the U. S. These wetlands are not used for interstate commerce including recreational activities, commercial fishing activities, or used for industrial purposes. These wetlands appear to be isolated and would not fall under Section 404 jurisdiction.

Areas may be jurisdictional wetlands. Wetlands A, D, E, F, H, R, and U are abutting relatively permanent waters that appear to flow into East Bear Creek which flows into Bear Creek, a tributary of Silver Creek, a tributary of the Nooksack River, a designated navigable waterway used of interstate and foreign commerce. These wetlands appear to be jurisdictional waters of the U. S.

Wetlands B, I, M, and P are considered adjacent, per the definition found at 33 CFR 328.2(c), to relatively permanent waters that appear to flow into drainage features that flow into East Bear Creek which flows into Silver Creek, a tributary of the Nooksack River, a designated navigable waterway used of interstate and foreign commerce. These wetlands appear to have a significant nexus to downstream traditional navigable waters and appear to be jurisdictional waters of the U. S.

Randel Perry
Project Manager

Date

Matt Bennett
Senor Scientist

Date

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): March 11, 2008

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Seattle District – SSHI, NWS-2007-1539-NO

Form 3 of 3–Wetlands adjacent to RPWs (B, I, M, and P)

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: WA County/parish/borough: Whatcom City: Bellingham

Center coordinates of site (lat/long in degree decimal format): Lat: 48° 48' 56.71", Long. 122° 30' 12.86"

Universal Transverse Mercator: Zone 10 N5407093.09 E 536443.63

Name of nearest waterbody: East Bear Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Nooksack River

Name of watershed or Hydrologic Unit Code (HUC): 17110004, Nooksack River

☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination. Date: 18 October 2007

☒ Field Determination. Date(s): 30 August 2007

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

☐ Waters subject to the ebb and flow of the tide.

☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **are and are not** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- ☐ TNWs, including territorial seas
- ☐ Wetlands adjacent to TNWs
- ☒ Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- ☐ Non-RPWs that flow directly or indirectly into TNWs
- ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- ☒ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- ☐ Impoundments of jurisdictional waters
- ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

NOTE: See Form 1 for info on isolated wetlands and Form 2 for info on wetlands abutting RPWs

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: 5, 475 linear feet: average 3' width (ft) and/or 0.38 acres.

Wetlands: 0.58 acres

c. Limits (boundaries) of jurisdiction based on:

Elevation of established OHWM (if known): .

2. Non-regulated waters/wetlands (check if applicable):³

☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.

Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is “adjacent”:

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under Rapanos have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are “relatively permanent waters” (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. **If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2.** If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. **If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.**

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: Nooksack River (HUC 17110004) 795 **square miles**

Drainage area: 130 **acres**

Average annual rainfall: 35 inches

Average annual snowfall: 16 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

☒ Tributary flows through **3** tributaries before entering TNW.

Project waters are **5-10** river miles from TNW.

Project waters are **1 (or less)** river miles from RPW.

Project waters are **2-5** aerial (straight) miles from TNW.

Project waters are **1 (or less)** aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW⁵: Onsite streams flow to East Fork Bear Creek, which flows into Bear Creek, a tributary of Spring Creek, which flows into the Nooksack River, a designated navigable waterway.

Tributary stream order, if known: 1.

(b) General Tributary Characteristics (check all that apply):

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary is: ☒ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: Grade control structure placed in Reach 3.

Tributary properties with respect to top of bank (estimate):

Average width: 18 feet

Average depth: 10 feet

Average side slopes: **2:1**.

Primary tributary substrate composition (check all that apply):

☒ Silts ☐ Sands ☐ Concrete
☐ Cobbles ☐ Gravel ☐ Muck
☐ Bedrock ☒ Vegetation. Type/% cover: grass species, 85%
☐ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Stable and vegetated.

Presence of run/riffle/pool complexes. Explain: none.

Tributary geometry: **Meandering**

Tributary gradient (approximate average slope): 5 %

(c) **Flow:**

Tributary provides for: **Seasonal flow**

Estimate average number of flow events in review area/year: **2-5**

Describe flow regime: intermittent and seasonal.

Other information on duration and volume: .

Surface flow is: **Discrete and confined**. Characteristics: See additional information below.

Subsurface flow: **Unknown**. Explain findings: .

☐ Dye (or other) test performed: .

Tributary has (check all that apply):

☒ Bed and banks
☒ OHWM⁶ (check all indicators that apply):
☒ clear, natural line impressed on the bank ☐ the presence of litter and debris
☐ changes in the character of soil ☒ destruction of terrestrial vegetation
☒ shelving ☐ the presence of wrack line
☒ vegetation matted down, bent, or absent ☐ sediment sorting
☐ leaf litter disturbed or washed away ☐ scour
☐ sediment deposition ☐ multiple observed or predicted flow events
☐ water staining ☐ abrupt change in plant community
☐ other (list):
☐ Discontinuous OHWM.⁷ Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☒ High Tide Line indicated by: ☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects ☐ survey to available datum;
☐ fine shell or debris deposits (foreshore) ☐ physical markings;
☐ physical markings/characteristics ☐ vegetation lines/changes in vegetation types.
☐ tidal gauges
☐ other (list):

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: Water is clear with moderate organic debris, general water quality is good, watershed has been extensively developed for agricultural and residential uses, downstream waters of Spring Creek are on the WA State 303(d) list for temperature and fecal coliform.

Identify specific pollutants, if known: Herbicides, fertilizers.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

(iv) **Biological Characteristics. Channel supports (check all that apply):**

- ☒ Riparian corridor. Characteristics (type, average width): shrub/herbaceous, 100+ feet.
- ☒ Wetland fringe. Characteristics: PEM dominated by grass species.
- ☐ Habitat for:
 - ☐ Federally Listed species. Explain findings: .
 - ☐ Fish/spawn areas. Explain findings: .
 - ☐ Other environmentally-sensitive species. Explain findings: .
 - ☐ Aquatic/wildlife diversity. Explain findings: .

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size: 0.58 acres

Wetland type. Explain: PEM depressional (B) and slope (I, M, P).

Wetland quality. Explain: Wetland B, I, M – Category IV; Wetland P –Category III.

Per Washington State wetland rating System (based on a scale of I to IV, I being the highest functioning)

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: Wetlands overflow into RPW during annual heavy rain events.

Surface flow is: **Discrete**

Characteristics: .

Subsurface flow: **Unknown**. Explain findings: .

☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

☐ Directly abutting

☒ Not directly abutting

☒ Discrete wetland hydrologic connection. Explain: See additional information section.

☐ Ecological connection. Explain: .

☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **5-10** river miles from TNW.

Project waters are **2-5** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters**.

Estimate approximate location of wetland as within the **100 - 500-year** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Water flowing from wetlands is clear, general water quality is good, watershed has been extensively developed for agricultural and residential uses, downstream waters of Spring Creek are on the WA State 303(d) list for temperature and fecal coliform.

Identify specific pollutants, if known: herbicides, fertilizers.

(iii) **Biological Characteristics. Wetland supports (check all that apply):**

- ☒ Riparian buffer. Characteristics (type, average width): Emergent (herbaceous), 10-80 feet.
- ☐ Vegetation type/percent cover. Explain: Emergent (grass species) 95% cover.
- ☐ Habitat for:
 - ☐ Federally Listed species. Explain findings: .
 - ☐ Fish/spawn areas. Explain findings: .
 - ☐ Other environmentally-sensitive species. Explain findings: .
 - ☐ Aquatic/wildlife diversity. Explain findings: .

3. **Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis: **20-25**

Approximately (10) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Wetland	Directly abuts? (Y/N)	Size (in acres)	Wetland	Directly abuts? (Y/N)	Size (in acres)
A	Y	0.95	N	N	0.21
B	N	0.02	O	N	0.05*
C	N	0.67*	P	N	0.49*
D	Y	0.03*	Q	N	0.15
E	Y	0.003	R	Y	0.37
F	Y	1.40	S	N	0.13
G	N	0.03	T	N	0.06
H	Y	5.00*	U	N	0.87*
I	N	0.01	V	N	0.01*
J	N	0.04	W	N	0.01
K	N	0.01	X	N	0.0
L	N	0.07	Y	N	0.002
M	N	0.05			

* Wetlands extend offsite

Summarize overall biological, chemical and physical functions being performed: see Section C below for summary.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: Subject wetlands have a significant nexus to downstream TNW.
Subject reach includes the on site tributaries (Reaches 1, 2, 3, and 4) and the off-site conveyance to East Fork Bear Creek. Site streams flow to East Fork Bear Creek, which flows into Bear Creek, a tributary of Spring Creek, which flows into the Nooksack River, a designated navigable waterway. East Fork Bear Creek, a perennial waterbody, is approximately 2,060 feet downstream from the subject site. The Nooksack River is approximately 6.6 miles downstream from the subject site.

Watershed has been extensively developed for agricultural and residential uses, downstream waters of Spring Creek are on the WA State 303(d) list for temperature and fecal coliform. Essential Fish Habitat for Pacific Salmon (designated under the Magnuson-Stevens Fishery Conservation and Management Act) extends from the TNW (Nooksack River) upstream through Silver Creek and into Bear Creek. Fish species listed under the Endangered Species Act utilize the waters of the Skagit River and Silver Creek; designated critical habitat for chinook salmon and bull trout exists in the Nooksack River.

Wetland functions are minimal wildlife habitat and habitat diversity, minimal enhanced food web support, moderate floodwater storage/attenuation, and moderate sediment input reduction and toxin removal.

The wetlands create and transfer organic carbon which supports the downstream food web of the TNW. Wetlands improve downstream water quality in TNW through sediment and toxin interception. The lengthy vegetated tributary/wetland complexes have the capacity to capture pollutants (agricultural herbicides/pesticides and sediments) to reduce the amount of pollutants, sediments or flood waters from reaching the TNW. Wetlands attenuates downstream flooding by reducing peak flow in the watershed during major storm events and attenuates erosion by detaining high flows during storms and reduce the duration of erosive flows, thus decreasing downstream erosion in streams.

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

- ☐ TNWs: linear feet width (ft), Or, acres.
☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**

- ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide rationale indicating that tributary flows seasonally: .
☒ Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: Tributaries identified as having continuous flow for 3-6 months. See additional information for details.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☒ Tributary waters: **5,475** linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. **Non-RPWs⁸ that flow directly or indirectly into TNWs.**

- ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

- ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above.
☐ Wetlands directly abutting an RPW where tributaries typically flow “seasonally.” Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: **8.6** acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

- ☒ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: **0.58** acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

- ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

⁸See Footnote # 3.

7. Impoundments of jurisdictional waters.⁹

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- ☐ Demonstrate that impoundment was created from “waters of the U.S.,” or
- ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰

- ☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
- ☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- ☐ which are or could be used for industrial purposes by industries in interstate commerce.
- ☐ Interstate isolated waters. Explain: .
- ☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
- ☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
- ☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- ☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - ☐ Prior to the Jan 2001 Supreme Court decision in “SWANCC,” the review area would have been regulated based solely on the “Migratory Bird Rule” (MBR).
- ☐ Waters do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction. Explain: .
- ☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: 0.71 acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Wetland delineation report dated May 2006.
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - ☒ Office concurs with data sheets/delineation report.
 - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: .
- ☐ Corps navigable waters’ study: .
- ☐ U.S. Geological Survey Hydrologic Atlas: .
 - ☐ USGS NHD data.
 - ☐ USGS 8 and 12 digit HUC maps.

⁹ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

- ☒ U.S. Geological Survey map(s). Cite scale & quad name: Ferndale Quad
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
- ☐ National wetlands inventory map(s). Cite name: .
- ☒ State/Local wetland inventory map(s): WA State Department of Ecology, 2001
- ☐ FEMA/FIRM maps: .
- ☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): WA State Department of Ecology, 2005; City of Bellingham, 2004.
or ☐ Other (Name & Date): .
- ☐ Previous determination(s). File no. and date of response letter: .
- ☐ Applicable/supporting case law: .
- ☐ Applicable/supporting scientific literature: .
- ☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD:

Date of Site Visit: 30 August 2007

Investigator(s): Randel Perry

Mr. Petur Sim, Mr. Gray Rand, and Mr. Ed Miller (consultants), Ms. Susan Meyer and Ms. Lori Enlund (Ecology) were also on site at the time of the visit.

1. **Site Description and Significant Resources in the area:** The site consists of 3 tax parcels with a total of 71 acres. The site is irregular in shape with a general slope to the south. Surrounding vicinity has been substantially developed for agricultural, recreational and residential uses. The site is bounded by the Bellingham Golf Course to the north, residential developments to the south, and undeveloped property to the east, and residential properties and Aldrich road to the west. Site was historically used for agricultural purposes and continues to be regularly mowed. The site is currently undeveloped and primarily vegetated with a field grasses. Wetlands in question are scattered across the properties. There are identified streams on the project site that are tributaries of East Bear Creek. East Bear Creek is located approximately 0.32 miles southwest of the site.
2. **Project Purpose and Description:** Fill/grade associated with residential development.
3. **Physical / Chemical Characteristics:**
 - a. Streamflow c.f.s.: 0.5 to 2.0cfs
 - b. Salinity: NA
 - c. Soils: Whatcom silt loam – 0-3% & 30-60% slopes (non-hydric w/ hydric inclusions).
Whatcom Labounty silt loam 0-8% slope (non-hydric w/ hydric inclusions)
Wetlands - 0"-5" - 10YR 3/2 silt loam
Below 8" – 2.5YR 4/2 silt loam w/ 10YR 3/6 mottles
Uplands – 10YR 3/2 silt loam
 - d. Hydrology: Saturation at shallow depth and signs of inundation at center of wetlands.
4. **Biological Characteristics:**
 - a. Percentage of dominant vegetation FAC or wetter: 95% in wetlands
 - b. Vegetation species list:
Riparian Wetlands
Soft rush (*Juncus effusus*), FACW+
Creeping buttercup (*Ranunculus repens*), FACW
Velvet grass (*Holcus lanatus*), FAC
Reed canarygrass (*Phalaris arundinacea*), FACW
Creeping bentgrass (*Agrostis stolonifera*), FAC+
Bluegrass (*Poa* spp.) FAC - FACU

Knotgrass (*Paspalum distichum*), FACW
Meadow foxtail (*Alopecurus pratensis*), FACW
Sawbeak sedge (*Carex stipata*), FACW+
Pacific willow (*Salix lasiandra*), FACW+

Field wetlands

Velvet grass (*Holcus lanatus*), FAC
Creeping buttercup (*Ranunculus repens*), FACW
Creeping bentgrass (*Agrostis stolonifera*), FAC+

Uplands

Canadian thistle (*Cirsium arvense*), FACU+
Reed canarygrass (*Phalaris arundinacea*), FACW
Tenuous bentgrass (*Agrostis tenuis*), FAC
Sweet vernal grass, (*Anthoxanthum odoratum*), FACU

- c. Fauna: bird presence.
- d. NWI Classification, associations/communities: PEM

5. Lateral Extent of Jurisdiction:

- a. OHW, MHHW, MHW and datum: 3' average
- b. Acreage of wetlands to be impacted: Approximately 0.93 acres
- c. Total acreage of wetlands/waters on site: 10.60+ acres of wetlands (some continue offsite)

- 6. Additional information:** The project area contains a number of streams that appear to be jurisdictional. The consultant has separated the streams into Reach designations, labeled 1-4 (see attached map). The streams are tributaries of East Bear Creek which flows into Silver Creek, a tributary of the Nooksack River. Based on site observations and information provided by the consultant:

Reach 1 Tributary - the largest reach at the lower end of the site, has water in it through June (greater than 6 months of flow), is approximately 1,400 feet long, an approximate average width of 6', approximate average depth of 1.5', and approximate flow in March of 2'/sec. Cfs approximated at 12 in March.

Reach 2 Tributary - the westernmost tributary to Reach 1, contributing less than 10% of existing flow in reach 1. This reach had water in it through the winter and early spring, March or April (greater than 3 months of flow), is approximately 750 feet long, with an approximate average width of 1.5', approximate average depth of 0.3', and approximate flow in March of 1'/sec. Cfs approximated at 0.5cfs in March.

Reach 3 Tributary - Center tributary to Reach 1 on the site, contributing approximately 60% of reach 1 flow. This reach is approximately 1,825 feet long, had flow through the early spring, April-May (greater than 3 months of flow), with an approximate average width of 3', approximate average depth of 0.5', and approximate flow of 1'/sec in March. Cfs approximated at 1.5 cfs in March.

Reach 4 Tributary - easternmost tributary to Reach 1 on-site. This reach is approximately 1,500 feet long, had flow through the early spring, April-May (greater than 3 months of flow), with an approximate average width of 3', approximate average depth of 0.5', and approximate flow of 1'/sec in March. Cfs approximated at 1.5 cfs in March.

Corps personnel walked around the identified boundaries of all wetlands and followed the apparent flow paths offsite. The flagged wetland boundaries appear to accurately delineate the wetland edges.

For Wetlands G, J, K, L, N, Q, S, and T, no surface water features could be identified connecting these wetlands with any other wetland or waterbody. These wetlands are separated from other wetlands or waterbodies by upland soils. The historic removal of woody vegetation and the subsequent use of the site for cattle grazing has compacted the natural soils creating conditions that impound precipitation for extended periods in depressions on the site. These wetlands appear to be a result of this condition.

Wetland A, E, R, U are abutting the Reach 1 and 4 tributaries

Wetland D and F are abutting the Reach 3 tributary

Wetland H is abutting the Reach 2 tributary

Wetland B drains south through a discrete surface feature (narrow braided shallow channel through grass clumps) into Wetland A/Reach 4 Tributary.

Wetland I drains south through a discrete surface feature (wide, braided shallow channel through grass clumps) into Wetland F/Reach 3 tributary

Wetland M drains southeast through a discrete surface feature (narrow, braided shallow channel through grass clumps) into Wetland F/Reach 3 tributary

Wetland P drains southeast through a discrete surface feature (narrow, braided shallow channel through grass clumps) into Wetland H/Reach 2 tributary

Wetland O extends offsite to the north. No determination was made for this wetland – it will not be affected by proposed project.

Conclusions: Areas may not be jurisdictional wetlands. Wetlands G, J, K, L, N, Q, S, and T do not have a surface water connection to other navigable or interstate waters of the U. S. or tributaries of waters of the U. S. These wetlands are not used for interstate commerce including recreational activities, commercial fishing activities, or used for industrial purposes. These wetlands appear to be isolated and would not fall under Section 404 jurisdiction.

Areas may be jurisdictional wetlands. Wetlands A, D, E, F, H, R, and U are abutting relatively permanent waters that appear to flow into East Bear Creek which flows into Bear Creek, a tributary of Silver Creek, a tributary of the Nooksack River, a designated navigable waterway used of interstate and foreign commerce. These wetlands appear to be jurisdictional waters of the U. S.

Wetlands B, I, M, and P are considered adjacent, per the definition found at 33 CFR 328.2(c), to relatively permanent waters that appear to flow into drainage features that flow into East Bear Creek which flows into Silver Creek, a tributary of the Nooksack River, a designated navigable waterway used of interstate and foreign commerce. These wetlands appear to have a significant nexus to downstream traditional navigable waters and appear to be jurisdictional waters of the U. S.